

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A process for the preparation of water insoluble, bio-release molybdenum fertilizers which comprises heating molybdenum trioxide, one or more basic compound(s) of metal(s) selected from the group consisting of magnesium, calcium and sodium, and phosphoric acid to a temperature in a range of 250 to 350°C till a solid polyphosphate is obtained and finally obtaining the dried powder.

2. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1, wherein molybdenum trioxide (MoO_3) and a basic compound such as oxides or carbonates of magnesium, calcium and/or sodium, are heated with phosphoric acid.

3. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1, wherein polymerisation is allowed to occur by removal of H_2O between adjacent P-OH groups of phosphates with the formation of P-O-P bonds by heating.

4. (Original) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 3, wherein, the polymerisation is allowed to continue till almost complete, whereupon a dry, friable powdery material is formed.

5. (Original) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 4 wherein the dry material obtained is ground to a free flowing, non-hygroscopic product

6. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 wherein interference by reducing impurities in ~~any of the raw materials which may interfere with the process~~ is ~~removed~~ reduced by the addition of an oxidant such as MnO_2 (pyrolusite).

7. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 wherein the product obtained is ~~[[,]]~~ a magnesium sodium polymolybdophosphate.

8. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 wherein the starting materials include

molybdenum trioxide containing up to 66.6% Mo, magnesia containing up to 60% Mg, sodium carbonate containing up to 43.4% Na and phosphoric acid containing up to 60 % P_2O_5 .

9. (Currently amended) A process as claimed in claim 8 wherein the weight ratio of Mo: Na: Mg: P used is 1: 0.96: 2.53: 6.46; wherein the corresponding molar ratio is 1 :4 :10 :20.

10. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim [1] 8 wherein ~~molar ratio of~~ Mo: P may be varied between a molar ratio of 1:5 and 1:30 ~~without seriously affecting product properties and is preferably in the molar ratio of 1:20 so as to produce a fertilizer with low Mo levels.~~

11. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim [1] 8 wherein the amount of Na is ~~optimally~~ at a molar ratio of 4 with respect to Mo.

12. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim [[1]] 8 wherein the amount of Mg is in the ratio Mg: P = 1 : 2 ~~which is sufficient to form the dihydrogen phosphate.~~

13. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim [[1]] 10 wherein the starting materials include molybdenum trioxide [[(]]containing up to 66.6 % Mo[(D)], sodium carbonate [[(]]containing up to 43.4 % Na[(D)] and phosphoric acid [[(]]containing up to 60 % P_2O_5 [(D)]].

14. (Currently amended) A process as claimed in claim [[1]] 13 wherein the molar ratio of Mo : Na: P ~~optimally used~~ is, 1 : 24: 20.

15. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim [[1]] 10 wherein the starting materials include molybdenum trioxide [[(]]containing up to 66.0 % Mo[(D)], magnesia [[(]]ntaining up to 60 % Mg[(D)] and phosphoric acid [[(]]containing up to 60 % P_2O_5 [(D)]].

16. (Currently amended) A process as claimed in claim [[1]] 15 wherein the molar ratio of Mo: Mg: P ~~optimally used~~ is, 1 : 12 : 20.

17. (Currently amended) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 wherein all reactants are mixed together, and heated at a temperature range of 200-350°C till dry.

18. (Original) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 17 wherein the ~~optimum~~ temperature is 300°C.

19. (Previously presented) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 1 wherein molybdenum trioxide is first heated in a solution of the base, which is selected from oxides and carbonates of sodium, calcium and magnesium and then further heated with phosphoric acid till dry.

20. (Cancelled)

21. (New) A process for the preparation of bio-release molybdenum fertilizers as claimed in claim 10 wherein the molar ratio of Mo: P is 1: 20.

Applicant: Chandrika Varadachari
Application No.: 10/567,425

22. (New) A molybdenum fertilizer, which is water insoluble but is soluble in 0.1N hydrochloric acid and 0.33M citric acid and comprises (i) at least one percent by weight of molybdenum; (ii) phosphorus in a molar ratio of Mo: P of at least 1 : 5; and (iii) at least one of the elements selected from the group consisting of magnesium, calcium, and sodium.